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ABSTRACT

This workshop was undertaken to exchange, through face to face interaction, theoretical formulations on adult education and the social sciences; and to provide adult educators with opportunities to learn more about theory building principles and strategies. Papers for the first day discussed research dissemination and utilization, measurement of participation, interrelationships between theory and practice, and concepts in extension education. Other papers dealt with principles of adult learning, organizational structures and changes, kinds of theories and resources, adult learning projects, interactions between people and materials in instructional situations, margin theory (pertaining to the adequacy of an adult's intellectual resources for maintaining autonomy), and an approach to model building based on the elements of family, community, work institution, ego or personality, and one's physical being. A summary discussion was held to evaluate the workshop and to decide whether to schedule another such meeting. (Appendixes include seminar participants and 20 references. Appendix A removed because of poor reproducibility.) (ly)

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Memo to: Commission of the Professors of Adult Education

From: Committee on Theory Building (Robert D. Boyd, Roy J. Ingham, Ann Litchfield, Howard Y. McClusky, Wayne L. Schroeder, Allen Tough, and William S. Griffith, Chairman)

in re: Theory Building Seminar, May 21-25, 1969

The Committee on Theory Building, after having explored various kinds of seminars, workshops, institutes and conferences on theory building in adult education for a period of three years, conducted a Seminar on Theory Building in Chicago, May 21-25 at the Shoreland Hotel. This document is the formal report on the activity of the Committee. Particular attention of the Commission should be directed to section III of the report dealing with an evaluation of the Seminar and suggestions for future activity.

The report was essentially drafted by Mrs. Ann Fales. Mrs. Carole Wollersheim assisted with the editing.

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Enclosure

I. INTRODUCTION

The purpose of this report is to provide a summary of the development and content of the workshop on Theory Building in Adult Education which was held in Chicago on May 21-25, 1969. The report is presented in three major sections. The introduction includes a brief history of the development of the workshop, an outline of the workshop format, a description of the participants, and a summary of participants' expectations as expressed during the first meeting of the workshop. The main body of the report summarizes the presentations and discussions which occurred during the workshop sessions. The report concludes with a summary of the recommendations made by participants regarding future activities dealing with theory. A list of references regarding theory building is appended.

A. Historical Development

The idea of the Theory Building Workshop was first discussed by several members of the Commission of the Professors of Adult Education at the National Seminar on Adult Education Research in February, 1966. The full Commission officially endorsed the project at their meeting in Chicago on November, 1966. William S. Griffith agreed to coordinate the planning of a Seminar on Theory Building and a planning committee was appointed in November, 1967. Members of this committee included: Wayne L. Schroeder, Professor of Adult Education, The Florida State University; Roy J. Ingham, Associate Professor of Adult Education, The Florida State University; Howard Y. McCusky, Professor of Adult Education, University of Michigan; Allen Tough, Associate Professor, Ontario Institute for Studies in Education; Robert Boyd, Professor of Adult Education, University of Wisconsin; Ann Litchfield, Assistant Professor in Adult Education, University of Chicago; William S. Griffith, Associate Professor in Adult Education, University of Chicago. Ann W. Fales, Staff Associate in Adult Education, University of Chicago, was also invited by Mr. Griffith to assist in the planning and development of a proposal for the Theory Building Workshop. The planning committee met on December 28 and 29, 1967 at the University of Chicago ~~(see Appendix A for minutes of that meeting)~~. At this meeting alternate proposals for a workshop were presented and discussed, possible resource people were suggested, and plans for the development and dissemination of a proposal were outlined.

A proposal for the workshop was subsequently drafted by Mr. Griffith and Mrs. Fales which incorporated the decisions made at the planning meeting. This draft proposal was circulated to all members of the planning committee for suggested revisions and

suggestions of possible sources of funding. The proposal was subsequently revised and recirculated with another request for sources of funding. No suggestions of possible funding sources were received.

At the 1968 meeting of the Commission of the Professors in Des Moines, Iowa, the Commission decided to go ahead with the workshop without outside financial assistance. It was agreed to hold the workshop in Chicago from May 21-25, 1969, with participants paying their own expenses. Mr. Griffith agreed to be responsible for the workshop planning and arrangements.

B. Purpose

The purposes of the Workshop, as developed by the planning committee and stated in the proposal, were as follows:

--To exchange, through face-to-face interaction, theoretical formulations about adult education and the social sciences in an effort to build and refine theories in adult education.
--To provide opportunities for adult educators to increase their knowledge and understanding of theory building principles and strategies.
--To disseminate the content and conclusions of the seminar to theoreticians, researchers, and practitioners in the field through publication.

The idea of publishing the seminar content and conclusions was dropped in view of the absence of financial support. In letters of invitation the purpose of the workshop was characterized in the following terms:

> The intent of the workshop is to gather as many persons interested in the development of theory in adult education as possible to work together to assess the state of theory in adult education and to begin to develop broader, more adequate theoretical foundations for the field.

C. Participants

All members of the Commission of the Professors were invited, by letter, in December, 1968, to indicate whether they planned to attend the workshop. Those who indicated an intention to attend were informed during April of the plans for the workshop and were invited to make presentations at the workshop if they wished. Letters of invitation were sent in mid-April to 81 professors responsible for graduate extension education but not members of the Commission of the Professors of Adult Education at the suggestion

of one of the planning committee members. Those who indicated an interest in attending were invited to make presentations at the workshop if they so desired. All those who replied that they were interested in attending the workshop were also invited to bring one advanced graduate student.

Seventeen professors indicated an interest in attending the workshop. Many others expressed interest but indicated they would be unable to attend.

A total of fifteen professors actually attended the workshop. Eight of these were professors of adult education, five were professors of extension education, one was a professor of rural sociology and one was a professor of education and the wife of one of the other participants. Four graduate students attended the workshop: three from the University of Chicago and one from the University of Michigan.[1]

D. Program

Because of the lack of funds it was decided not to invite outside resource people to prepare papers for the workshop. Participants were asked if they wished to make presentations during the workshop and several indicated, in advance, that they would do so. The program and format of the workshop were left largely undefined until the first meeting of the workshop participants. At that meeting, held on the evening of Wednesday, May 21, participants expressed their expectations for the workshop. A wide variety of expectations was expressed. Mr. Bruce summarized his impression of the discussion by suggesting that there seemed to be four types of expectations. These four types (with illustrative examples) were

1. Exposure to concepts with relevance to adult education from outside the field.
   e.g. - Have outsiders make presentations re theory building.
   - Identify social science concepts that have relevance to the field and relate them to theoretical aspects of other disciplines.

2. Sharing of participants' own theoretical ideas and efforts.
   e.g. - Discussion of our own theoretical attempts in terms of the questions "Is this theory?" and, if not, "what is it?"
   - Individual participants suggest ways of going about developing theory which they have found useful.

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[1] A list of participants will be found in Appendix B.

3. Increased understanding of what theory is and how to build it.
   e.g. - What kinds of theory are there? how does a theory differ from a taxonomy?
   - What goes into the formulation of theory in adult education, an applied field?
   - Common operational definition of theory.

4. State of the Art.
   e.g. - Assess where we are and where do we go from here.

Following the discussion of expectations a schedule of presentations was agreed upon. The group decided to meet from 9:00-12:00 and from 1:30-5:00 p.m. on Thursday, Friday and Saturday, not to meet Sunday, and to develop an order for presentations but to be flexible as to the amount of time given to each one. The following tentative schedule was agreed upon.

Thursday, May 22

Robert Bruce - Research Utilization
Ann Litchfield - Measurement of Participation
Roy Ingham - Observation of the Phenomena of the Field
Gertrude Kaiser - Concepts in Extension Education

Friday, May 23

John Ginther, University of Chicago, invited as guest to discuss his Model of Instruction
Curtis Trent - Concepts in Extension Education
William Griffith - Adult Education Organizations - Structures and Changes
Allen Tough - Adult Learning Projects
Phyllis Cunningham - Types of Theory and Resources

Saturday, May 24

Howard McClusky - Margin Theory
Virginia Griffin - Building a Model
General Wrap up

The procedures agreed upon were that each person would present his own working definition of theory before making his presentation. Presentations would be largely informal, would last until discussion ran out, and the group would then move on the next topic. It was also agreed that each participant would provide Mr. Griffith with a personalized summary of the portion of the program led by him for use in the workshop report. Unfortunately not all of these summaries have been received. Nevertheless the general tone and emphases of the workshop is adequately reflected.

II. SUMMARY OF PRESENTATIONS AND DISCUSSIONS

A. Robert Bruce - Research Dissemination and Utilization

Mr. Bruce's working definition of theory was that theory is an attempt to explain or describe the way the world works. It presumes some understanding of cause and effect or relationships between variables. There is a reciprocal relationship between theory and research: as we do research we are trying to refine the theory to make it fit the real world better. A model is a picture of a theory.

Mr. Bruce described the stages he had gone through in developing his supply and demand model of research utilization. The work began by trying to understand two different philosophies of extension which were called "supply activated" and "demand activated." In the second stage he attempted to adapt a model originally presented by Egon Guba[1] which included five stages: Research, Development, Dissemination, Demonstration, and Implementation, to research in the extension situation. The adaptation was stated as: Basic Research-->Applied Research-->Demonstration-->Dissemination-->Clientele (Implementation). The focus of these efforts was on the product and process, not on the organization. In the third stage, following his attendance at a training session on non-mathematical approaches to computer simulation, he used a flow chart approach including three types of variables: processes, inputs, and decision points.

Up to this point all of the work on this model had been "armchair thinking." The next step was to try to do something about it. Mr. Bruce discussed the idea of two kinds of activated systems--supply and demand--with people in extension work. People in general extension, engineering and medical extension agreed with the idea of a supply activated system. Those in cooperative extension agreed with the idea of demand activated systems.

The next step was to try to validate the model. The model was tested using the English agricultural education system on the basis of the assumption that if the model had value it should have it for a number of quite different organizations. The results of this test indicate that supply and demand both function as motivators in the system and interact with each other. A new flow chart was developed (Figure 1) from the English data. This chart includes the decision point variable which appeared, in the English data, to be an artifact of the particular organization studied.

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[1] Egon Guba and Stanley Elam, eds. The Training and Nurture of Educational Researchers, Sixth Annual Phi Delta Kappa Symposium on Educational Research, (Bloomington, Ind.: Phi Delta Kappa, 1965).

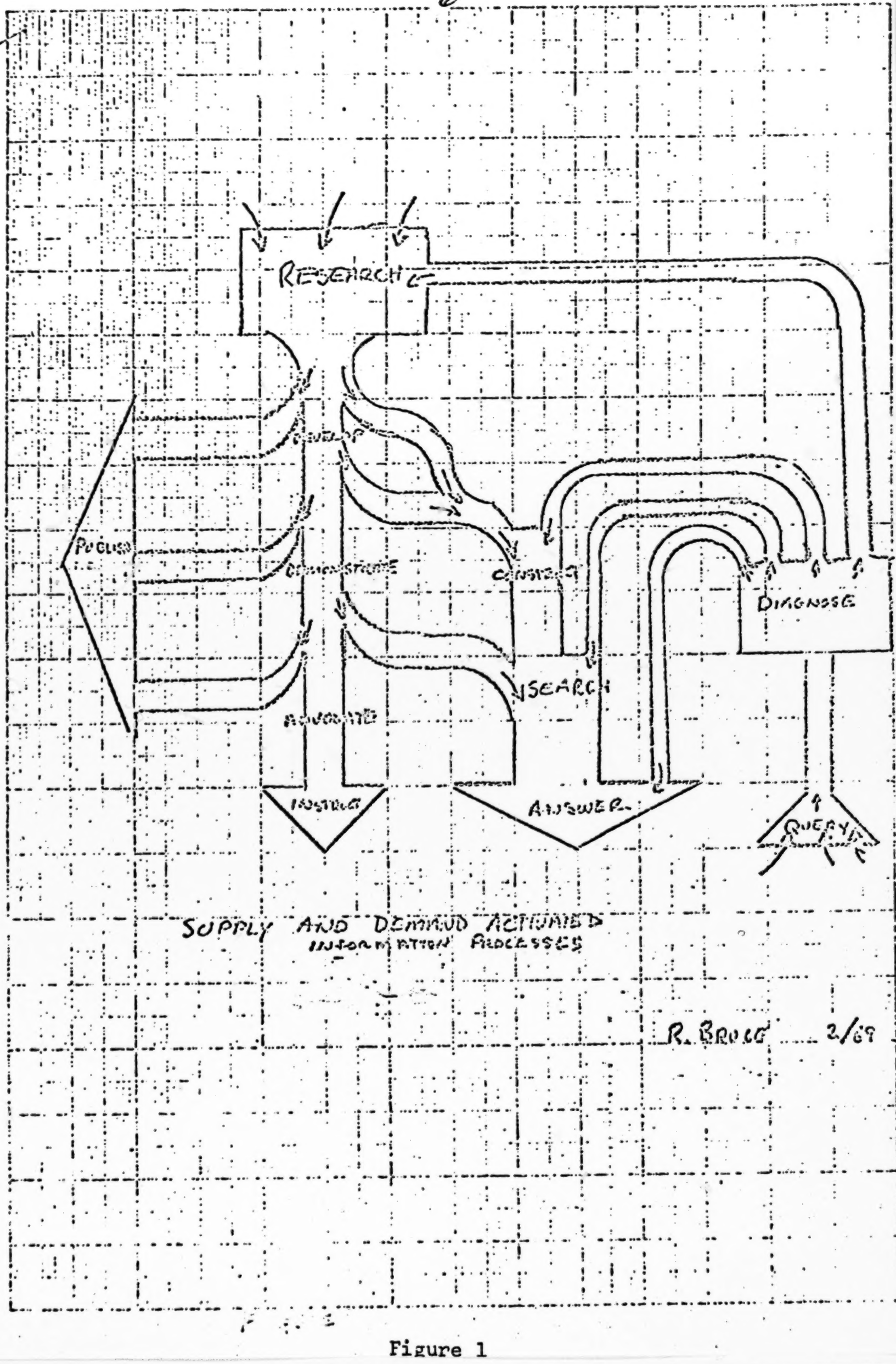
RESEARCH
DIAGNOSE
SEARCH
ANSWER
QUERY
SUPPLY AND DEMAND ACTUATED
INFORMATION PROCESSES
R. BRUCE 2/69

Figure 1

Throughout the entire period of model development the emphasis was on the research utilization process rather than the particular organization in which the process occurred. In order to concentrate on the process it was necessary to cut through the situational overlay.

The discussion following Mr. Bruce's presentation brought out the following additional points.

1. Problem solving within an institution does not fit within the model.

2. The latest version of the model might be improved by including the decision points and by expanding it to include the sensory apparatus which screens the query and determines what inputs get into the system.

3. According to Mr. Bruce, the model is not a theory because it does not imply necessary or cause-and-effect relationships.

4. The central concept is that intentional diffusion of information is motivated by supply and demand. If there are supply and demand activated systems, it should be possible to generate hypotheses which would predict what kind of organization would develop depending upon whether the organization was designed to do one or the other. In an organization activated by demand there would be a large growth of the segment which was designed to meet demands, and for supply activated organizations there would be a large growth of the segment which was designed to serve the supply function.

5. There was no conscious use of any one other theory in the development of this model, but it has antecedents in many.

6. The model has appeared to move from the more specific to a more general approach. The most recent diagram, however, does not reflect the state of the conceptual thinking and deliberately excludes some details in order to include others. The first diagram was over-simplified and had a pseudo-completeness; the most recent diagram does not.

7. Computer path symbology is a useful technique when trying to build theory because it allows you to use empty boxes when you don't know what the actual relationships are. At some point, however, the boxes need to be filled.

B. Ann Litchfield - Measurement of Participation

Miss Litchfield began by indicating six specific areas she hoped to cover in her presentation. These were:

1. Reasons for attempting to develop theory.
2. What is Theory?
3. What is Participation?
4. Another attempt at Theory Building.
5. Assumptions about Theory.
6. Participation as the Beginning of a Theory.

1. Reasons for attempting to develop theory. -- Her reasons for trying to develop a theory of adult education based on participation were:

   a. A personal sense of lack of preparation in the area of theory development and a belief that one way to become better prepared in this area is to try to actually develop theory.

   b. A belief that the concept of participation can provide the fuzzy beginnings for explaining the underlying basis of the field.

2. What is Theory? -- Miss Litchfield indicated that her present definition of theory included 10 elements. Some of these elements came from articles by Halpin[1] and Thompson.[2]

   a. A theory should be a statement of a systematic way of thinking.

   b. Theory is economic--it should simplify things.

   c. Theory deals with what is, not what ought to be.

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[1] Andrew W. Halpin, "The Development of Theory in Educational Administration," in Administrative Theory in Education, Andrew W. Halpin, ed. (Chicago: Midwest Administration Center, 1958).

[2] James D. Thompson, "Modern Approaches to Theory in Administration," in Administrative Theory in Education, Andrew W. Halpin, ed. (Chicago: Midwest Administration Center, 1958).

d. Theory is not limited by time or place (it holds across time, sex, etc.)

e. It is generalizable, hence stated abstractly.

f. It can be proven true or untrue--at least the non-state of it can be proven.

g. It should have explanatory power.

h. It should have the power to predict.

i. It should be some sort of chain-like sequence of explanation and prediction.

j. Theory can be judged by the quality of hypotheses that can be generated from it.

3. What is Participation?

Miss Litchfield pointed out that she was using an inductive approach. Her starting point in theory development is participation, which is one dimension or element in a larger scheme of a theory of adult education. Within her framework, participation is defined as voluntary, conscious, purposeful effort on the part of an individual to improve his skill, sensitivity or knowledge, whether alone or in a group. The focus in this approach to participation is on process and on the individual.

Participation is defined operationally in terms of number of activities, amount of time spent in activities, and the judged educativeness of activities. Components of the operational dimension of participation include (1) an "extent of participation score," (2) a profile of a person's educational participation, and (3) patterns of people's educational participation. Scores on items reflecting these three aspects of participation are by type of educational activity. An individual's profile of educational participation consists of the combination of scores, based on the relative distribution by type, of his set of participation activities. Groups of educational profiles form patterns of educational participation. Several profiles with similar characteristics constitute a pattern.

4. Another attempt at Theory Building about Adult Education Participation -- Harry Miller's Approach.[1] This is a deductive approach. A brief description of this approach and how it differs

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[1]Harry L. Miller, Participation of Adults in Education: A Force-Field Analysis, Occasional Papers Number 14 (Boston: CSLEA, 1967, pp. 32).

from her approach was given by Miss Litchfield.

5. Assumptions about Theory in Adult Education. -- These are assumptions which Miss Litchfield makes in thinking about a theory which will include participation.

a. All men and women possess, in some measurable way, the desire to learn (curiosity aspect).

b. Education is a voluntary activity of adults.

c. Learning encourages the desire for more learning.

d. All adults participate in educational activity to some extent (if we only kn ew how to measure it.)

e. The individual is the one enduring, unifying element among the total of his acts of educational participation.

f. A limited number of profiles of adult participation can be identified.

g. An individual's profile of educational participation is not unique.

h. There is a limited number of patterns of participation, though the number of classifications is unknown.

6. Participation as the Beginning of a Theory. Next steps in making participation, as one dimension, relevant to broader frameworks and thereby the beginning of a theory, are to develop statements of the interrelationships between other variables which would theoretically relate to participation. A theory of adult education based on participation would probably have the following characteristics:

a. It would deal with human behavior.

b. There would be an adult education content attached to the behavior (taxonomic classification--might include things like level of complexity).

c. There would be an element of the theory which involves the process of learning.

d. There would be an element of the theory which involves the quality of learning.

e. There would be an institutional context.

f. There would be a non-institutional context.

g. It would deal with motivations or motives (orientations).

h. It would deal with accessability or availability (perceived and real).

i. It would include a sequential aspect of learning.

j. It would deal with the value attached to learning and education.

In the discussion during and following Miss Litchfield's presentation the following points were made:

1. Theory can be tested in terms of two major dimensions - its internal consistency (logic) and the measurement of variables within it.

2. The elements listed as being potentially in the theory could be categorized in three classes of behavior - human, adult, and educational.

3. Independent variables in hypotheses derived to test some of the elements would be things like motivation, accessability. The dependent variables would be scores, profiles, and patterns.

C. Roy Ingham - Interrelationships between Theory and Practice

Mr. Ingham indicated that his major starting point was a concern with the "payoff" of theory development in the form of improvement of practice in the field. He is concerned with the translation of theoretical statements into practice. In thinking about how to accomplish this payoff the idea of using possiblistic models rather than probablistic models seemed useful. A possiblistic model takes into consideration the idiosyncratic constraints in various situations. These same constraints prevent the generalized predictions developed using probablistic models from holding. The idiosyncracies are probably the norm rather than the exception. Mr. Ingham suggested that perhaps a more userful means of accomplishing the payoff in practice would be for adult educators to provide sets of alternative courses of action and to identify the range of situations in which various alternatives would work.

Applying this approach to the study of participation, Mr. Ingham came to the conclusion that the concept of participation doesn't fit adult education behavior. Searching for a construct which would represent adult education behavior more realistically, he tried the idea of information seeking--the conditions under which adults seek information. If the individual is going to engage

in activities which have in common the trait of seeking information, then it is necessary to try to describe the condition which has to exist for an individual to engage in these activities--i.e., he has to know how to process the information--know the rules. The information seeking concepts he is using to investigate participation are derived from cybernetic theory.

A third concern expressed by Mr. Ingham was with clear identification of events. It is not always clear that a given event, identified as an instance of a given concept, really is an instance of that concept. He believes that researchers and theoreticians in adult education have not paid enough attention to precision in their observation of the phenomena of the field and that a great deal more precise observation is needed.

In the discussion of Mr. Ingham's comments the following points were made:

1. Both Miss Litchfield and Mr. Ingham have been describing something about how to go about building theory. They began with a "burning question," and then developed a central concept. At that point it is necessary to conduct an in-depth analysis of the concept. Then you have to ask about the kinds of variables which may be related to the central concept. Perhaps the aspect of this process which is most necessary in the field of adult education right now is a detailed conceptual analysis.

2. The notion of intervening sets of variables is important. We need to consider the intervening conditions.

D. Gertrude Kaiser - Concepts in Extension Education

Miss Kaiser reported on a project being carried out by the Cooperative Extension Division at the University of Illinois. The purpose of the project was to identify the basic concepts which should be included in a Master of Extension Education graduate program. Work began in December 1963, with Ralph Tyler as consultant.

The first step in the project was to define what was meant by a concept. The definition agreed upon was that a concept must include two or more principles and must be open ended. Learning is an example of a concept within this definition.

The next step in the project was to identify the social sciences which have relevance to extension education. A role model of the extension worker was developed and eleven social sciences

were found to be relevant to that role. Twenty-four different aspects of the extension worker role were identified.

In an analysis of the adult education component of the extension worker role the following concepts were identified:

Adulthood
Adult education
Adult learner
Program - curriculum
Program - curriculum development
Program planning situation
Educational objective
Learning experience
Evaluation
The group as a target of change
The group as an agent of change
Decision
Administrative supports.

If these are concepts, within the definition agreed upon, they should be useful in identifying the kinds of behaviors desired at several levels of curriculum development. For example:

1. It should be possible to identify the situation where the concept is found.

2. The student should be able to formulate an operational definition of the concepts in his own words.

3. Other definitions of the concept should be possible.

4. It should be possible to identify selected references which will assist in developing an understanding of the concept.

5. It should be possible to develop techniques for observing and measuring the concept as described in the operational definition.

6. Other useful concepts should be included in the definition.

7. It should be possible to identify applications and usefulness of the concept.

Documents describing the concepts within the fields of Psychology and Political Science which are relevant to the adult educator were circulated as examples of the type of thing which would result from the project.[1] Miss Kaiser indicated that students had found the identification of concepts a valuable learing experience.

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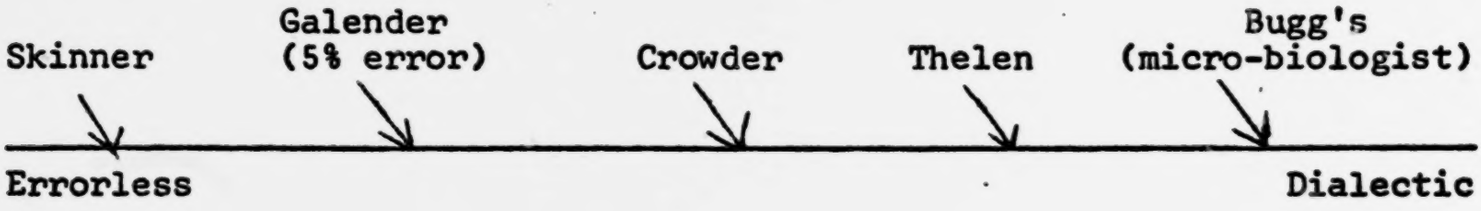
[1]These papers were mimeographed copies of student work and were not available for distribution. Further information can be obtained from Miss Kaiser (see attached list of participants).

E. John Ginther - Model of Instruction - Process of Development

Mr. Ginther described the process of how the model started. It began in 1954 when teaching machines first became a major concern. Skinner's theories were one basis of programmed instruction. This approach suggested that only correct responses should be reinforced and errors punished. Crowder maintained that the errors in thinking should be explored before reaching the final output. He developed the concept of scrambled books in which each wrong answer is considered and treated differently.

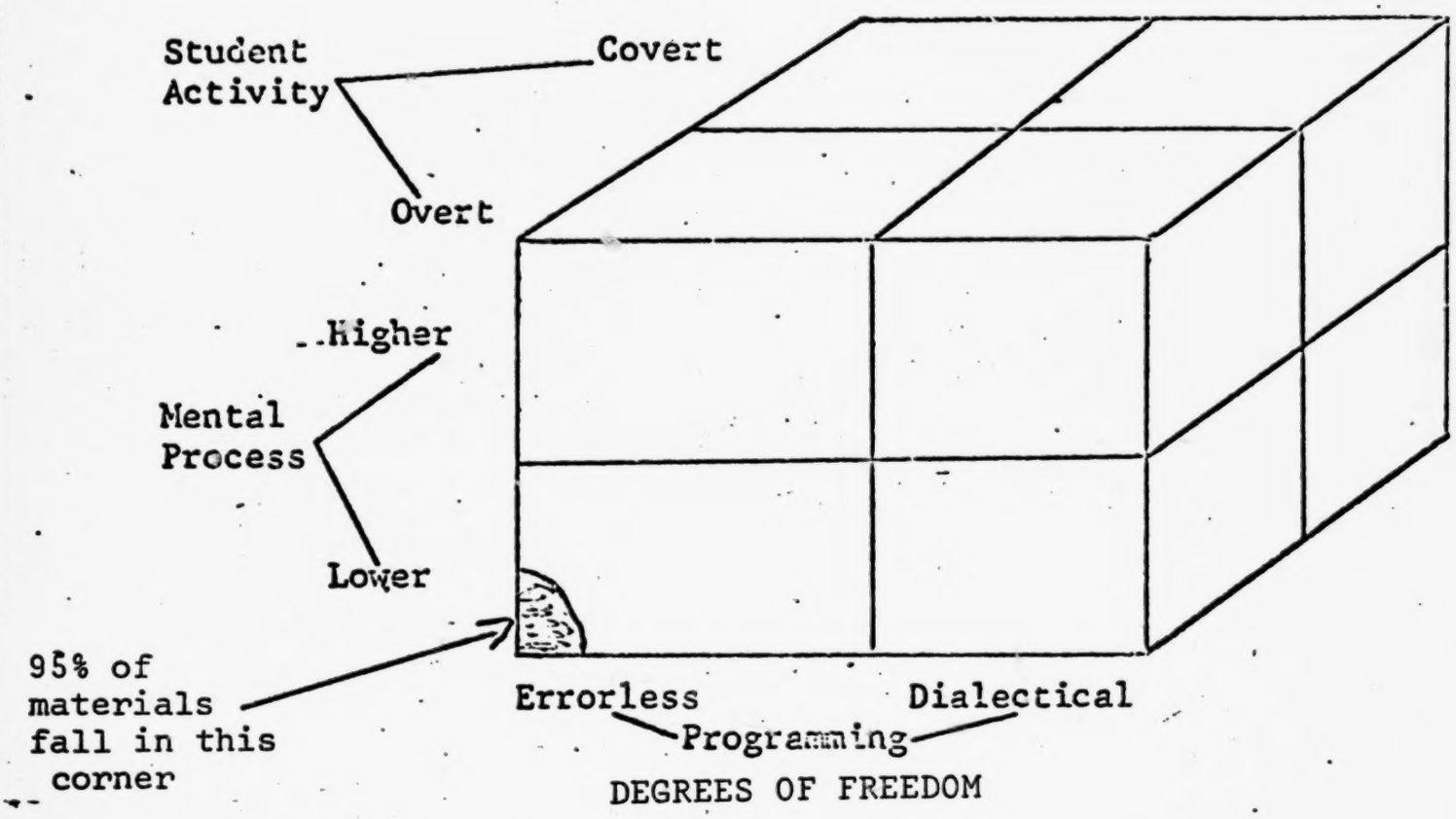
In 1958-59 there was concern about the confusion regarding programmed learning. In a serious attempt to make some kind of sense out of the various positions, Mr. Ginther charted the various writers on the subject on a communication continuum from errorless to dialectic.



The idea for the errorless--dialectic continuum was borrowed from the way people interact and analogously appied to interaction between people and materials.

The next concern was to try to develop teaching materials which would be further toward the dialectic end of the continuum than Crowder's (who tried to induce people to make errors in order to correct them). Mr. Ginther called the errorless-dialectic dimension the "degrees of freedom"; the question was how to increase the degrees of freedom for the student in materials' instruction.

Further thinking added a dimension of level of mental processes to the model. A third dimension of student response mode was also added. Technically, the dimensions are continua, but they are dichotomized in the diagram of the model.



Before adding the student response dimension, Mr. Ginther analy some programmed materials and found that 95% of them fell in the errorless, lower mental process quadrant. After adding the student response dimension he tried to apply the model to the human teaching process. He tested out the idea of errorless instruction in the classroom and found that it worked. Later he found that much of the instruction in classrooms is errorless. He then tried to structure situations at the extreme ends of the dimension on the basis of the assumption that if it were not possible to obtain significant differences at the extremes of the dimensions then it would not be possible in the middle. Tests of the model in these situations have indicated some significant differences.

All the studies which have been done using the model have used cognitive achievement as the dependent variable.

Mr. Ginther described the findings of Barney Berlin's study,[1] which seem to confirm the usefulness of the model.

Some of the findings were:

1. In all classrooms under all conditions teachers were superior to materials at generating unrelevant thought processes.

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[1]Barney Berlin, "The Relation of the Learning Experience of the Students," (Unpublished Ph.D. dissertation, Department of Education, University of Chicago, 1965).

2. Stereopaths in errorless classrooms, in both teacher and materials modes, had a higher percent of low level mental processes than rationals did.

3. Rationals, under dialectic procedures and teacher mode, had a far higher percent of higher level thought processes than under any other conditions or than did stereopaths. This was the most significant finding in the study.

4. Stereopaths had higher levels of unrelevant thoughts in the dialectic condition under both teacher and materials modes.

Discussion during Mr. Ginther's presentation raised questions about the conduct of research using the model, such as how to validate the accuracy of the teacher mode and about other variables which might be used as dependent and independent variables. Questions were also raised about whether a teacher could be trained to use the dialectic condition and whether teachers have a natural teaching style which fits into one or another mode and which is difficult to overcome. Mr. Ginther indicated that teachers do seem to have a natural teaching mode which can be categorized on this dimension, but that they frequently perceive their teaching style inaccurately according to this concept, i.e., a teacher who thinks his style is dialectic may actually teach in the errorless mode.

F. Curtis Trent--Principles of Adult Learning

Mr Trent indicated that he had been examining the principles of adult learning as listed in the Handbook of Adult Education[1] in an effort to determine the current status of theory in adult learning.

Theory was defined, following Daniel Griffiths, as a set of assumptions from which can be derived a general set of empirical laws by mathematico-logical means. This view of theory includes several hierarchical components, beginning with presumptions. The only criterion for selecting a presumption is that it be useful. The development of theory goes through four steps, from presumption to law: presumption--> assumption--> theory--> law. How this development occurs was not discussed in detail.

Mr. Trent reported that, having listed the principles of adult learning as taken from the Handbook, his conclusion was that most of them fall in the presumption category. Some may be assumptions.

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[1] Malcolm S. Knowles, ed. Handbook of Adult Education in the United States: 1960 (Washington, D.C.: Adult Education Association of the U.S.A., 1960).

But, there is little or no theory reflected by these principles. Mr. Trent also referred to a list of assumptions about adult learning which he had found useful.[1]

G. William S. Griffith--Adult Education Organizations--Structures and Changes

Mr. Griffith began by presenting several definitions of theory.

a. A theory: a more or less plausible or scientifically acceptable general principle offered to explain phenomena.

b. A body of theorems presenting a clear, rounded, and systematic view of a subject.

c. The general or abstract principles of any body of facts; pure as distinguished from applied.

A theorem is defined as:

a. a general statement that has been proved or whose truth has been conjectured or;

b. that which is considered and established as a principle or law.

Mr. Griffith then described the process of building theory as discussed by Robert Dubin.[2] Dubin says that theory building begins with description. The essence of description is to name the properties of things. The more adequate the description the greater is the likelihood that the units derived from the description will be useful in subsequent theory building. Units can be classified in terms of nominal units and real units, and in terms of primitive (undefined, such as those produced by factor analysis) and sophisticated (defined) units.

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[1]Louis Cassels, "Eight Steps to Better Training," Nation's Business, Vol. 49, No. 3 (March, 1961), pp. 40-41, 90-93.

[2]Robert Dubin, Theory Building: A Practical Guide to the Construction and Testing of Theoretical Models (New York: The Free Press, 1969).

A law states the relationship between units but need not include casuality. There are three kinds of laws:

a. Categoric--states that values of a unit are associated with the values of another unit in a symetrical but non-directional way. Categoric laws describe simple relationships and are associational.

b. Sequential laws--which always embody a time sequence.

c. Determinant laws--associate determinant values of one unit with determinant values of another unit.

Using this framework, Dubin says that a scientific model is composed of determinant units interacting by determinant laws with each other within specified limits. It is not necessary that a theory have a data base. A collection of a group of statements isn't a theory because it doesn't have any explanatory power. The test of accuracy of a proposition is whether or not it follows logically from the model to which it applies. The number of propositions which can be derived from a theory is a mathematical function of different ways the values of the units of the model may be combined with all other units to which they are lawfully related.

A theory is a model of some segment of the observable world. Scientific models are the imaginative recreation of some segment of the observable world by a theorist interested in comprehending the forms and functions of selected segments of the world around him. A theoretical model provides the researcher with one or more predictions that may be tested by marshalling data.

If the purpose is to build theory the investigator will do descriptive research. If the purpose is to refine or test theory the investigator will design research which tests hypotheses.

Mr. Griffith then went on to discuss theory as applied to organizational growth. He began with the assumption that organizations have magnitudes, which can be spoken of as shape and size, existing in a framework of time. The form of an object is a diagram of forces--from it we can judge or deduce the forces which are acting or have acted upon it. The shape of an organization is, in part, a product of the forces which impinge upon it from the environment. The present form of an organization is partially a result of anticipation of the future. The basic question, then, is: Is there any uniformity in the transformation of organization shape along a time dimension?

One answer to this question has been suggested by James Q. Wilson.[1] He suggests that the central analytical attribute of any formal organization is its economy of incentives (inducements-

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[1]James Q. Wilson, "Innovation in Organizations: Notes Toward a Theory," in James D. Thompson (ed.) Approaches to Organizational Design (Pittsburgh: University of Pittsburgh Press, 1966).

contributions balance). Innovation is a fundamental change in a significant number of tasks. The greater the cost in scarce inducements the more radical the innovation.

Innovation occurs in three stages:

1. Invention--conception of a change
2. Proposing of a change
3. Adopting and implementing a change.

Hypothesis 1--the greater the diversity of the organization the greater the probability that members will conceived of major innovations.

Hypothesis 2--the greater the diversity of the organization the greater the probability that major innovations will be proposed.

Hypothesis 3--the greater the diversity of the organization the smaller the proportion of major innovative proposals that will be adopted. Mr. Griffith pointed out that this is where the theory stops. Propositions which can be derived from the theory include:

1. If organizational diversity is directly proportional to the rate of proposals and inversely proportional to the rate of adoption, little can be said about the total number of adopted innovations in organizations.

2. It is easier (less costly) to increase an organization's capacity to generate new proposals than it is to increase its capacity to ratify any given proposal.

3. Proponents of a particular innovation are not likely to perceive fully the difficulties that stand in the way of successful innovation.

4. Many organizations will adopt no major innovations unless there is a crisis.

5. Organizations that rely primarily on intangible incentives (as do voluntary associations) will display in exaggerated form the contrary tendencies that determine the innovative capacity of all organizations.

6. Decentralization can be regarded as a method for increasing the probability of ratification of new proposals by confining (in advance) their effect to certain subunits.

7. The extent to which participative management will stimulate the production of proposals or stimulate the adoption and implementation of proposals will depend upon the extent to which the decision making group becomes a highly valued source of incentives and the extent to which these group based incentives are congruent with those offered by the larger organization.

8. Innovative proposals will be more frequent in organizations in which a high degree of uncertainly governs the members' expectations of rewards.

9. To the extent that the members of a society attach high value to extraorganizational, particularly nonmaterial, incentives, there will be an increased number of inventions (proposals) but a decreased probability of organizational innovation.

A major focus of this presentation was the effort to establish the distinction between a "construct" and a "theory."

In the discussion subsequently it was agreed that McClusky had presented "marginality" or the "concept of margin" as a concept. As such it is a building block for theory but is not, in and of itself, a theory.

H. Phyllis Cunningham--Types of Theories and Resources

Miss Cunningham began by referring to several resources which she had found useful in developing her understanding of theory. She indicated her particular interest in "grounded theory," and then proceeded to describe various ways of categorizing types of theories.

1. Distinctions in Theory.

a. Grand Theory--for example Marx, Freud, Parsons --These theories attempt to develop laws which are universal.

b. Theories of the Middle Range--These theories exhibit intermediate level hypotheses and an attendant range of speculation.

c. Minor Theories-- This distinction refers to theories which concern themselves with day to day, general, non-specific guesses about relationships.

2. Types of Theories.

a. Conflict Models--These models have within them two conflicting elements. An example of a theory which is largely of the conflict type is Marxian theory.

b. Functional Analysis--These theories examine variables in terms of their function. The most well known proponents of the functional type of theory are Parsons and Bales.

c. Eclectic Confusion--It is questionable whether this is a theory type--but it includes a variety of things frequently called theories, such as methodology or typologies which are not organized in an explanatory fashion; post facto interpretations; and empirical generalizations.

3. Models of Theory Building.

a. Empirical--the empirical orientation toward theory building implies a quantitative approach but need not be restricted to quantitative analysis. It is an inductive, mathematical, and precise approach. Hypotheses are developed first and then tested.

b. Grounded Theory--The major distinctions between the empirical and grounded theory building orientations are that grounded theory is deductive, does not include hypotheses, and begins by looking at as many aspects of the phenomenon as possible, without preconceived ideas as to what will be found to be important.

c. Platt's Strong Inference Model for Theory Building.

This approach to theory building suggests that reliance on inductive inference should help in avoiding apparently trivial propositions. It proposes developing a series of alternative hypotheses all of which might be, by inference, probable explanations of the phenomenon being considered. Platt makes three suggestions regarding the use of a logical tree for building theory:

1. Learn the method of scientific rigor,
2. Make sharp exclusions--develop the tree, make a choice of what you think is crucial for understanding
3. Ask two questions--what experiment could disprove your hypothesis and what experiment does affirmation of your hypotheses disprove.

The way to deal with alternative hypotheses is to design a crucial experiment where only one hypothesis can be true.

Considerable discussion followed dealing with the analysis of adult education theoretical writing, considering the extent to which it met the criteria of grounded theory.

I. Allen Tough--Adult Learning Projects

Mr. Tough began by explaining that he is currently writing a book primarily for those who are interested in research theory-building, and innovation in adult education. This book will outline and integrate his research and thinking from January 19[illegible] to December 19[illegible], plus the findings of several other researchers. The central phenomenon that he has studied is any deliberate sustained effort to learn by an adult. Such an effort was defined by Tough as a series of episodes in which the adult's primary motivation has been to gain and retain certain very clear and definite knowledge and skill. A learning episode is operationally defined as an event where at least 51% of the learner's motivation (intent) is to gain and retain, for at least two days, clearly defined new knowledge and

skill. (Information to be used within two days and not necessarily remembered is just information processing.) A learning project is a series of learning episodes, concerned with a common knowledge and/or skill, which must engage the learner for at least seven hours within a six months period.

This definition includes, in Mr. Tough's opinion, most adult education participation. Various learning modes can be included in any given learning project. Reflective thinking, for instance, would be included as one mode of learning, if it met the other criteria of the definition.

Mr. Tough listed several questions for which he hopes to provide tentative answers and briefly described the present state of the thinking with regard to these questions.

1. How common and important are learning projects during adulthood? He has the feeling, from the interview data, that learning projects are very close to the hearts of the learners.

2. What proportion of adult learning projects are motivated primarily by the desire for some degree or certificate, or by the necessity of attending some class or conference because of an order from one's employer? A tentative framework of types of learning projects has been developed which takes the following form:

Control over the What and How of Learning	Credit	Non Credit
Group (Professional or peer instruction)		
One-to-one situation (Professional or friend)		
Non-Human Materials		
Self-Directed		

Projects which are operationally designated as "credit" are those for which a certificate, diploma or other formal recognition is given, those which are required by an employer, or those which are required by law. "Non-credit" includes everything else.

3. Why do adults learn, and what do they learn? Thirteen general categories of reasons why adults learn have been identified and a large variety of things that they learn has been determined.[1]

4. With what tasks and decisions do adult learners need help? How much help? From what resources? For example, the learner may have to make decisions about how to go about the project. How much help he needs and where he goes to get it has been investigated by Mr. Tough.[2] The results of that investigation will serve as the primary basis for answering this question.

5. In what proportion of learning projects does the primary control and decision-making about what and how the person will learn during each session reside in (a) a group (a group with a professional instructor, or a group of peers who take turns with the planning), (b) one other person with whom the learner interacts in a one-to-one situation (that other person may be a professional instructor or a friend), (c) a non-human resource such as programed materials or a set of recordings, or (d) the learner himself? What reasons do adult learners have for choosing one of these four?

6. What are the major variables in the helping relationship? Mr. Tough indicated that, up to this point, he was fairly sure of the nature of the questions which will be dealt with. The remaining questions still are tentative and his thinking on them not yet fully formulated. However he will also treat the following questions:

7. What difficulties do adult learners have in obtaining appropriate help, and how could adult educators and others improve the help that is available?

8. What implications for practice do all of the preceding findings have for groups with an instructor, and/or credit program?

9. In what ways does this knowledge about adult learning projects illuminate certain other fields of theory and practice, and what can we learn from those fields?

10. What will adult learning in the future be like, and what further research and development is needed?

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[1] Allen Tough, "Why Adults Learn: A Study of the Major Reasons for Beginning and Continuing a Learning Project," (Report of a research project, Ontario Institute for Studies in Education, Department of Adult Education, Toronto, Ontario, mimeo, 1968).

[2] Allen M. Tough, "The Teaching Tasks Performed by Adult Self Teachers," (unpublished Ph.D. dissertation, University of Chicago, Department of Education, 1965).

Discussion of Mr. Tough's presentation focused on two primary concerns. The first concern was with why the credit/non-credit dimension had been selected as a crucial one. It was suggested that "own volition" or "credit with others" might be a more useful dichotomy. Tough indicated that the credit/non-credit dimension was an attempt to control for the effect of external influences and that a satisfaction with self vs. satisfaction for others dimension would be added later as part of the analysis of reasons for learning.

The second major focus of this discussion was whether this material would be considered to be theoretical. Mr. Tough indicated his belief that the work could not yet be considered a theory as much of it is descriptive, but that it should provide a major step in the development of a theoretical framework. He emphasized that his approach to the study had been a "shuttle" process, moving back and forth from relatively undirected observation to conceptual analysis of the data gained in such observation and back to more systematic observation. He indicated that the framework discussed remains to be empirically tested but that the process he has used has provided tentative confirmation of several ideas.

J. Howard McClusky--Margin Theory

Mr. McClusky began by distributing two brief papers and by asking the group to note underdeveloped or unclear aspects of his presentation. He pointed out that the concept of margin grew out of his complimentary interests in community development and psychology. He emphasized the importance of using a life cycle approach in the study of adult life, and pointed out that margin theory was related to a number of ideas about the growth of the self through the life span.

Mr. McClusky sees the theory of margin as an explanatory theme around which can be related a portion of existing theory--similar to White's theory of competence, or Erickson's stages of development. Margin theory deals primarily with the questions of why and when people do things rather than how and what they will do. It can be considered to be a motivational type theory.

Some of the key terms discussed were:

Adult--An adult is a person who has developed an "x" level of margin which he can maintain by his own control.

Load--Load is composed of the self and social demands which a person must meet to maintain a minimum level of autonomy. It includes

both the actual demands and the self-perceived demands on the person.

Power--Power consists of the resources which the person can bring to bear in coping with the load. Power can be seen as analagous to intelligence. There is a level of operational power which is analagous to ability, and a level of potential power which is analagous to intellectual capacity.

Margin--Margin is the ratio between load and power.

$\frac{\text{Load}}{\text{Power}}$ = Margin.

Autonomy--Autonomy is an acceptable level of getting along and functioning in society, without excessive dependency. The amount of autonomy which is needed varies among individuals and in different societies.

Margin can be seen in terms of a surplus of power. The actual quantities of load and power are not important in themselves--it is the ratio which is the key idea. Whenever the load and power are in fair balance the individual can have a favorable life. Margin can be seen as analagous, in social psychology, to factor in other fields such as the safety factor in Engineering, capita in Economics, biological surplus (maturity) in Biology. The margin ratio is a result of a transactional situation. The ratio fluctuates but, if it remains within a narrow range for a considerable time period, it can be looked upon as a constant factor. Maturity can be defined as the adult with a surplus of power. Different kinds of power may be applied to different kinds of loads. For example, increased wisdom may substitute for reduced physical power in later life. At the extremes of load or power it may be necessary to act upon the other aspect of the ratio because at the extremes there is less room for manipulation of that variable. Load is probably more variable and more easily influenced than power, but both are capable of being influenced by education and in other ways.

Margin supplies autonomy. Autonomy is necessary for growth (Maslow, Burline, Allport). Autonomy is related to the concept of self as subject or object. There is more margin if the self as subject is more prominent; less margin if the self as object is more prominent. Margin is also related to the concepts of homeostasis and growth. Both operate in a kind of cyclical balance between equilibrium and growth with periods for recovery and consolidation. The person with low margin is static, the high margin person is more growth-oriented with greater movement from one level of equilibrium to another.

A question was raised as to whether margin was a theory or a categoric law. It was pointed out that the margin ratio was a categoric law and that in order to be considered a theory it would

have to be related to some other variable. For example, if one wanted to categorize people by type and predict that type A would always act to narrow the limits of margin and type B would always act to increase his margin this could be considered a theoretical statement. One step in developing the concept of margin to the stage of theory would be to identify the most meaningful categories to be related to the concept. Another would be to relate some additional concepts such as access to power and imposed stress to margin.

Mr. McClusky continued by pointing out that the concept of margin was the basis for a unique psychology of the adult years and the life span. He compared it to the study of metals. We know about the general nature of the material (the individual in the case of margin) but must investigate the specific stresses which will be applied to it under different conditions. Using this analogy he pointed out that the older the adult gets (in the middle adult years) the greater his load and the greater the variety of loads. To cope with the increased load the adult will need a very large reserve of power or opportunities to free new sources of power.

The concept of margin has a variety of implications. For example, various kinds of psychological growth curves could be predicted for various load/power ratios. The curve for the older individual would be quite flat if there were inner resources which could be substituted for external types of power. The concepts of transcendence and substitution need to be developed more fully and their relation to margin investigated. For example, there is probably a difference in the types of power utilized by men and by women--women may be more likely to use expressive power and men more likely to use instrumental power. Power might also be differentiated in terms of the power to reduce load and the power to cope with load. The perceived differential between what the load and power are and what they ought to be could, itself, be a source of load. In such a case the individual could adjust by bringing the "ought to be" back to the level of what "is," or the differential could be left open and margin used to bring the actuality to the level of the "ought to be."

Mr. Art Lavi, a graduate student who has been working with Mr. McClusky, described his work with the concept of margin. His approach has been primarily a phenomenological one. The basic assumption is that when load is equal to power the individual has a full life. Load is the total of internal expectations (those loads perceived by the individual which arise from within) and external expectations (those loads which the individual perceives which are external demands on him). Power is defined in this work as the individual's potential power.

MP≥L is the ideal situation. A ratio of 1:1 is equivalent to leading a full life. But the individual doesn't really want to use this maximal power because it is impossible to predict the variations in external stress which will be included in the total load. Therefore, it is best if the potential power is always greater than that needed to cope with or reduce the actual load. The mathematical formala for margin and the relationships between load, power, and margin has limitations as a calculation formula and is used, instead, as a definitional formula.

Another assumption basic to Mr. Lavi's approach is that life is a dynamic situation--a striving towards and a reaching out. The individual moves outward, then moves to equilibrium and then out again. Mr. Lavi, therefore, views margin theory as a change theory. The idea of homeostasis is negated in so far as life is dynamic and moving forward. He then compared his view of margin theory with Hegel's concepts of thesis, antithesis and synthesis. The individual moves from thesis through antithesis to synthesis. The synthesis then becomes a new thesis. The thesis is the product of a favorable relationship between load and power. Synthesis is any force which would establish the balance. The antithesis upsets the balance. It can be seen as the external force which the thesis moves to overcome, thus creating the synthesis which is redefined as the new thesis.

Mr. Lavi also explained his concept of safety margin. It is important for the individual to always have extra margin to cope with unexpected load. Ideally the individual should operate within a range of margin from .5 to .8. Examples of the different degrees of margin which different personality types might have were suggested. For example, a brilliant person would have extremely high potential power; an unambitious person would have high margin because of low load (internal); an over-achiever would have low margin because he would always be pushing his power beyond the safety margin limits; and a cautious person would have a high margin because he would keep a larger degree of power in reserve. Use may maintain or increase margin through increasing power. Disuse would allow the margin (surplus power) to atrophy. The time dimension can operate to increase or reduce load, depending on the duration of the load.

This model was described by Mr. Lavi as an alternation model--moving back and forth from a homeostatic state to a forward thrusting state. (It was pointed out in discussion that the concept of homeostasis in biological sciences does not imply a static or quiescent state but can be considered to be a dynamic balance rather than a steady state at a fixed level.)

Reference was made in discussion to Maddi's concept of an integrative core composed of a customary level of activation (which may be comparable to power) and an actual level of activation (which

may be comparable to load). Mr. Lavi indicated that, in his opinion, this formulation is not sufficiently dynamic. He sees it as largely an entropic approach which does not include a renewal force.

K. Virginia Griffin--Building a Model

Miss Griffin began by briefly outlining her notion of what theory is. In her view theory defines concepts, has a set of postulates and/or assumptions, and describes and explains relationships. A theory should have consistency, congruency with known data, and utility through generating hypotheses or propositions or practice. A theory is not a model. A model represents a phenomenon but does not explain anything.

Miss Griffin explained her own process of model building, pointing out that she had started to devise a model but now found herself developing a theory. The process began with her Ph.D. dissertation the purpose of which was to build a model of the stages of county agents' professional career development. The specific subject of study was changes in the attitudes of male professionals (county agents) toward their profession, through time, in institutions. At this stage she developed a conceptual matrix which included stages of career and a number of dimensions of the work life. Her original intention was to fill all the cells of this matrix.

The next step was to identify assumptions and postulates and to set some boundaries. This stage was carried out by extensive reading in many areas of knowledge and reflective thinking. Certain assumptions were identified:

-- Changes in the pattern of integration would represent growth.
-- The model would deal with the commonalities of people, disregarding uniquenesses.

Twenty-seven postulates were identified. These were not used as assumptions. These postulates were statements such as:

1. Man is a need meeting animal
2. These needs include all those Maslow includes.
3. There are forces which act upon man. (An interactional matrix of those forces was developed.) These forces set expectations for him and provide means of meeting his needs.

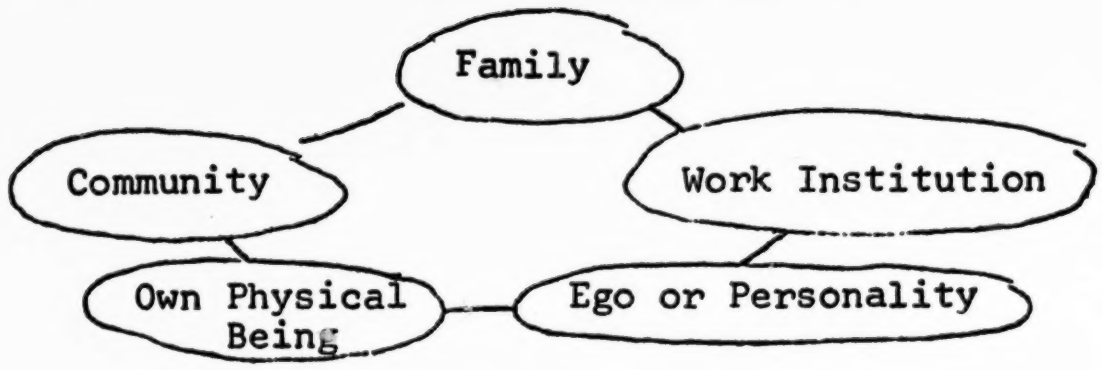

Figure 2, Interactional Matrix of Forces Acting on Man

Each of these forces changes over time. Some change more than others. They all interact and the interaction affects how the individual reacts on the job. A person, when he puts all the parts together, will perceive conflicts and changes. Then he will feel a need to integrate the conflicts or changes in some way.

The next step would be to come up with a pattern of the various ways the individual uses to integrate the conflict at various stages. Then, by going back to the model, it is possible to predict the individual's behavior based on this particular work stage and the various dimensions of the work life. This is equivalent to saying that the patterns the individual uses to integrate change are equivalent to growth.

The test of the model is based on its internal consistency, congruency with the data, and its utility. Internal consistency is tested by going back to the postulates. The congruency of the model with other theories and with reality is also tested. The utility of the model will be tested by examining its usefulness as the basis for a staff development program for cooperative extension workers.

Several modes of integration corresponding to the occupational stages have been identified by Miss Griffin. The stages may be cyclical and be repeated in a variety of situations besides the occupational one.

A suggestion was made that Kornhauser's book on conflict and accommodation would be a relevant reference with regard to integration and resulting changes in attitude.

Miss Griffin indicated that the most useful step in the process of developing the model had been the spelling out of the postulates.

III. SUMMARY

The experiences of the Theory Building Seminar were evaluated by the participants in a general discussion led by Mr. Griffith. Several questions were posed to guide the discussion:

1. What value has the meeting had?
2. How could it have been improved?
3. Was proper use made of the resources available?
4. Should a similar meeting be scheduled again?
5. Comments or suggestions on arrangements, location, length of meeting, format, etc.
6. Follow-up on this meeting.

The discussion regarding these questions is summarized below.

1. What value has this meeting had?

The participants generally agreed that the meeting had been of value to them. Specific ways in which it had been helpful included: by clarifying participants' own thinking about their own research, and providing an opportunity for critical sharing of ideas; by clarifying what theory and theory building are and providing guidance as to how to build theory; by legitimating theory building efforts; and by providing the basis for an interactive group interested in the development of theory and willing and able to offer comments, criticisms, and to share ideas and efforts with one another.

One participant summarized this discussion in terms of three areas in which this meeting had been valuable for participants:

1. telling our ideas
2. getting new ideas from inside or outside
3. developing new conceptual tools

2. How could this meeting have been improved?

There were few suggestions as to how the meeting could have been improved. Those that were made seemed to reflect a concern with the nonspecificity of the original purposes of the seminar. Additional suggestions were offered as to how a similar meeting in the future could be conducted to best advantage. Specific suggestions for ways in which this meeting could have been improved included: a clearer definition of what theory is should have been developed before discussing how to build it; papers could have been provided in advance of meeting. A suggestion was made that the meeting would have been better if it had followed the design of the original proposal and brought in more outside resources, but there was considerable lack of agreement on this point.

Suggestions for improvement of a future meeting were: involve members of the Commission of the Professors of Adult Education more; provide documents in advance; involve more graduate students; begin with a particular subject matter as the focus (e.g., conflict in modern society) and center presentations around theory relating to that content (this suggestion was discussed in terms of its advantage of providing a focus to the discussions and its disadvantage of perhaps causing some people to feel less competent in a given area and thereby n arrowing the range of attendance and/or involvement); begin with one philosophical position, build a theory from that starting point, and try to operationalize it as a research problem. No general agreement was reached as to the advisability of incorporating the ideas into a future meeting.

3. Was proper use made of the resources available?

In general, there seemed to be agreement that the balance of outside and "inside" resources was acceptable and the resources within the group were used well. There was some concern about the assumption that everyone should make a presentation. Some seemed to feel that the time used in their presentations could have been better spent in more lengthy discussion of other's presentations. This did not seem to be a generalized problem however.

4. Should a similar meeting be scheduled again?

There seemed to be consensus that a similar meeting should be scheduled at some time in the future. Several suggestions were made as to what such a meeting should cover and when it should be scheduled. (See responses to #2 above for additional suggestions). Needs for the future which were identified included: more understanding of the rigor of theory building; how the creative process in theory building is facilitated; follow-up on what has resulted from this meeting (maintenance of collegial group). Mr. Jerry Coombs, Professor in Philosophy of Education at the University of British Columbia, who has written on the Theory of Teaching Strategies, was suggested as a potentially valuable resource person for a future meeting. It was suggested that it would be one-and-a-half or two years b efore the group would be ready for additional lengthy discussions, but that a brief meeting, held in conjunction with the Seminar on Adult Education Research, would be a good way of maintaining the collegial group in the interim period. It was agreed to hold such a meeting.

5. Format, length, participant group, etc.

It was agreed that the graduate students should be strongly encouraged to attend future meetings and should be selected on the basis of their involvement in research or interest in theory and theory building. It was pointed out that the collegial nature of the group

might be threatened if it became too large, and that the size of the group should be limited to a number which could interact in a meaningful fashion. For instance, if the group were considerably larger, several people might be invited to give papers and to be reactors to the papers, with a larger group observing and discussing. There was concern expressed that the meeting not become a research reporting session.

There was general support for the notion of providing papers in advance. No comments were made as to the length of this meeting. In view of the decision to postpone any further substantive meeting for some time, it was agreed that the interim meeting would be short--no more than a half day and probably less.

6. Follow-up

Several persons suggested that further efforts be made to try to locate grant funds for future meetings. The W. K. Kellogg Foundation was suggested as one possible source. No allocation of responsibility for such attempts was made.

In addition to the interim follow-up meeting in Minneapolis, it was agreed that Mr. Griffith would provide participants with a summary of the proceedings of the meeting and would make a report to the Commission of the Professors of Adult Education. It was also agreed that a mailing list of participants would be attached to the proceedings and that an annotated bibliography of references cited by discussants would be included.

Appendix A missing

APPENDIX B

List of Participants
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APPENDIX C

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This list of references includes those works footnoted in the body of this report as well as selected references suggested by participants as useful for understanding and building theory in adult education. There is some overlap in these two groups of references. Those in the latter category are marked with an *.

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